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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,661	04/08/2004	Lothar Kerstein	4623	8773

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EXAMINER

HOLZEN, STEPHEN A

ART UNIT PAPER NUMBER

3644

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/821,661

Applicant(s)

KERSTEIN, LOTHAR

Examiner

Stephen A. Holzen

Art Unit

3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11-19 is/are rejected.
- 7) ☒ Claim(s) 9-10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/12/2004
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-19, drawn to a system for deployment in space, classified in class 244, subclass 172.4.
 - II. Claim 20, drawn to a method of using the system of claim 19, classified in class 244, subclass 172.4.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus can be used in a different method such as a method used to test the operation of the apparatus (claim 19) on earth.

3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with William Fasse on 12/18/2005 a provisional election was made without traverse to prosecute the invention of group 1, claims 1-19.

Affirmation of this election must be made by applicant in replying to this Office action.

Claim 20 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 5-8, 12-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hinds (4,273,305).

Re – Claims 1 and 8: Hinds discloses ~~essentially~~ every aspect of the present invention. Hinds disclose a “free flying apparatus” (i.e. a satellite), a servicing and inspection apparatus (i.e. an orbiter) having a “container” (i.e. a payload bay) having an opening (see Figure 3, the doors 7 constitute an opening), a “closing mechanisms” (although not specifically disclosed the payload doors inherently are motor operated), and the doors are open when for capturing and deploying the satellite.

Re – Claim 5: Satellites as presently understood generally have batteries, fuel tanks, thrusters on-board electronics and communication transmitters and receivers and at least “a tool”.

Re – Claim 6: This claim generally reads on any payload docking mechanism and satellites. The payload bay is technically outside the crew module in the nose of the orbiter.

Re – Claim 7: The examiner asserts that orbiters inherently have monitoring and control stations within the crew module that allow an astronaut to communicate with a satellite via telemetry.

Re – Claim 12: Figure 3 to Hinds illustrates walls that are sloping away from the opening.

Re – Claim 13: Space shuttle payload bays have a camera therein (see for example answers.com “view of the Canadran during a space shuttle mission”; which illustrates a camera taking a picture from within the payload bay; attached)

Re – Claim 14: this claim generally reads on radar and positioning sensors used for capturing satellites with an RMS. These limitations are inherently anticipated by Hinds RMS

Re – Claim 15: Inherently the orbiters have vibration isolators and padding that present damage to payload during launching and retrieval operations. But not for vibrations isolators (classified in class 244/173.2) the payloads and their electronics which are very expensive would be damaged due to the shock of entering and exiting the earth's orbit)

Re – Claim 16: Most (if not all) modern day satellites have photo electric cells that capture energy from the sun and store it in battery, so that the satellite

can then use this stored energy for station keeping operations when on “the dark side of the earth”.

Re – Claim 17: Satellites all have “on board electronics”, and “electrical contacts” on their internal circuit boards (regardless of the fact that satellite is deployed or docked)

Re – Claim 18: Inherently modern day satellites are configured such that they can be refueled. (Since the examiner anticipates the applicant challenging this assertion, the examiner references the applicant to “Vickers 5,592,176) which teaches that satellites can be refueled.)

Re – Claim 19: This claim is essentially a combination of claims 1, 6, 7, and 8. Since these claims are all anticipated by Hinds, claims 19 is likewise anticipated.

It should be appreciated that examiner has relied heavily on “inherency” to reject these claims. This is the case since the applicant has used claim language that is so broad that it reads on almost any satellite and “docking” mechanism. Simply challenging the examiner to produce references to prove his “inherency” assertions will result in a final rejection. Each of applicant’s broad recitations of structure can be found through searches online.

Furthermore it should be appreciated that the applicant’s functional language in the claim does not serve to impart patentability. While features of an apparatus may be recited either structurally or functional, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather

than function. Apparatus claims cover what a device is, not what a device does.

A claim containing a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior apparatus teaches all the structural limitation of the claims. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-.2 (Fed. Cir. 1997); Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990); Ex parte Masham, 2 USPQ 2d 1647 (Bd. Pat. App. & Inter. 1987).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinds in view of ordinary skill in the art. Hinds does not disclose a spherical satellite. It should be appreciated that Sputnik was essentially a spherical satellite. Therefore since the general shape has been taught in the prior art, it would have been obvious to one having ordinary skill in the art select any shape deemed necessary for the proper operation of the satellite

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9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hinds in view of ordinary skill in the art. Hinds does not disclose the material the satellites is made from. However it would have been obvious to one having ordinary skill in the art to make the exterior surface material from a "soft material" since (1) applicant has not defined what all is meant and encompassed by the phrase soft (thus it is a broad term, not indefinite) (2) the applicant has not suggested on the record that the soft material solves any specific problem in art. Therefore the selection of a "soft material" would be within the ordinary skill of one working in the art for the suitability of performing as intended. (See *In re Leshin* 125 USPQ 416.)

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hinds in view of Rhodes (6,437,527) Hinds does not disclose using an LED on a door to determine the position of a satellite. The basic concept of applicant's idea is the same as a garage door opener, which uses LED's to determine if an object is obstructing the doorway. Rhodes discloses that it is known to use LEDs in combination with doors to determine if an object is obstructing the doorway, thus preventing damages to the object. It would have been obvious to one having ordinary skill in the art, to use LEDs (or any other camera, radar device) in combination with the payload doors to ensure that the doors have an unobstructed path. The fact that applicant has located the LED on the inner upper rim of the container or the inner upper side of the door does not impart patentability since it would have been obvious to one having ordinary skill in the art at the time the invention was made to locate a known positioning determining means

on the inner side of the door since it has been held that rearranging parts of an invention involves only routine skill in the art. (In re Japikse 86 USPQ 70).

Allowable Subject Matter

11. Claims 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen A. Holzen whose telephone number is 571-272-6903. The examiner can normally be reached on M-F 8:30-5:00.

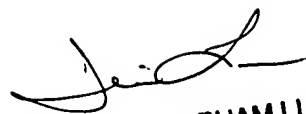
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 571-272-7045. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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